

Group number: Dec1713

Project title: IoT Monitor

Client &/Advisor: Geiger

Team Members &/Role:

Ian Harris: Team Leader - Web Role

Tim Lindquist: Key Idea - Leafnode Role

Gregory Steenhagen: Webmaster -Web Role

Steven Warren: Communication -Leafnode Role

Terver Ubwa - 3G Node

Khoi Cao - 3G Node

o Weekly Summary

This week we prepared for the final presentation. We cleaned up the Design Document and the Project plan. We prepared a powerpoint and did a few run throughs of the material to prepare us for tuesday. Took some time to fill our web app with some dummy data that is more relevant to our project. The structure of the site is completed as well, but functionality still needs to be implemented. We also updated our project website (the dec1713 one) with all of our documentation in preparation for the final presentation

o Past week accomplishments

- **Ian Harris:** Redeployed our web application, made sure we had documentation about how to do that going forward. Updated our team website with all of our documentation. Spent several hours preparing our final presentation and rehearsing with the team.
- **Gregory Steenhagen:** Finished the website structure and filled it with dummy data. Personalized it, and made it ready to add functionality.
- **Khoi Cao:** Debugged the issue with HTTP access for the home node. Contact AT&T provider to get some important parameter for the configuration (2 out of 6). Practice for the final presentation.
- **Terver Ubwa:** soil sensor measurements, presentation preparation, home node transmission and reception.
- **Tim Lindquist:** Soil moisture testing throughout the week. Created slides and

incorporated pictures into presentation. Received ordered parts. Wrote data generation program.

- **Steven Warren:** Another soil moisture testing week, created slides and prepared for the final presentation. Worked on integrating structs into the leaf node program.

Pending issues

- **Ian Harris:**
- **Gregory Steenhagen:** Website functionality needs to be implemented.
- **Khoi Cao:** Get the 3G network configuration to work and encapsulate the data package to the web server
- **Terver Ubwa:** figuring out the optimum distance that reduces BER in transmission and reception of the home node. Working with khoi to resolve issues with http protocol.
- **Tim Lindquist:** Need to email Dr. Grewel testing results after the are formatted professionally.
- **Steven Warren:** Getting leaf nodes to send and receive correctly.

o Individual contributions

<u>NAME</u>	<u>Individual Contributions</u>	<u>Hours this week</u>	<u>HOURS Cumulative</u>
Ian Harris	Redeployed web app, updated team website, worked on the final presentation a bunch	6	56
Gregory Steenhagen	Updated website to have information relevant to us. Completed website structure. Ran through several test presentations with group.	7	48.5
Khoi Cao	Read the soil moisture. Finalize my section in the presentation	6	52
Terver Ubwa	Home node transmission and reception. Took soil sample measurements and presentation preparations.	6	48
Tim Lindquist	Made presentation slides. Took sample tests. Wrote data program for server group	3	73
Steven Warren	Presentation slides, prepared speech, leafnode networking	5	74

o Comments and extended discussion

Need to talk to gain insight from professor about the node network.

o Plan for coming week

- **Ian Harris:**
- **Gregory Steenhagen:** Do presentation, and wrap up some stuff for the end of the semester.
- **Khoi Cao:** Wrap up the achievement for the home node design and plan out the solution for the data reception.
- **Terver Ubwa:** determine an optimum distance to reduce BER of transmission and reception, decide on home node wait time to start reception after it sends timer values to the sensor nodes. work with Khoi to resolve http protocol issues. clean up lab.
- **Tim Lindquist:** Talk to professor about network Idea. Present on Tuesday. Wrap up moisture testing and clean lab.
- **Steven Warren:** Continue looking on how to use structs to program the program.

o Summary of weekly advisor meeting

The web server group showed Dr. Geiger a layout of how the website could potentially look when it is complete. The moisture test results were shown to geiger and we were able to see that the lines did steady out after about 1.5 days. The home node group demonstrated sending data to a smart phone via text message. The group invited Dr. Geiger to attend the presentation on Tuesday. We plan on meeting one last time during dead week.